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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/723,549	11/27/2000	Brian Doege	23969-P001US	7916

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EXAMINER

BARRY, CHESTER T

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 07/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

MF=7

Office Action Summary

Application No.

09/723,549

Applicant(s)

DOEGE ET AL.

Examiner

Chester T. Barry

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-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 5/24/02, 7/1/02.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-5, 8-20, 27, 28 and 35-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) all pending claims is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5. 6) ☐ Other: _____

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Appeal

Applicants are reminded that they may appeal the examiner's rejection once any claim has been twice rejected. At least one claim is rejected for the second time below. Applicants need not wait until the rejection is made final in order to appeal.

35 USC 112(2nd)

Claims 3 – 5, 8 – 20, 27 – 28, 42 are rejected under 35 USC 112(2nd) for failing to particularly point out and distinctly claim the subject matter for which patent protection is sought.

Claim 3 recites a "small-tank system." After expressing the view that a tank 35 – 40 gal. is clearly a "small" tank and that a 120 gal tank is not a small-tank, but rather is understood by applicant as a "large" tank, the examiner issued a rejection under this section on the grounds that the skilled artisan would not know which of the tanks in the "over 40 gal but less than 120 gal." size range met the limitation of a "small-tank."

Claims must be construed not in a vacuum, but with the application, prior art, and applicant remarks of record in mind. In response to the examiner's rejection, applicant maintains recitation of a "small-tank system" in claim 3 and argues in his remarks of record that "[n]o dimensional upper boundary limit was recited." The examiner agrees with applicants' concession that no upper boundary was recited in the specification – therein lies the very heart of the problem.

Moreover, this argument implies that there is no size limitation on a "small-tank system." This argument causes applicants' implied construction of "small-tank" to be

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repugnant to any art recognized understanding of the common term, i.e., not a specialized term of art, "small" in a manner which would suggest no size restriction at all. Accordingly, absent a specific retraction of this argument of record, any claim reciting "small tank" in this application would fail to comply with 35 USC 112(2nd), one of the several statutory provision substantially related to patentability.

Furthermore, there is no support in the art, i.e., recognition in the art or specialized diction, of defining a malodorous tank as a "small tank" and an odorless tank as a "large tank." Common usage of the terms small and large refer to size, volume, mass, or other similar **extensive** properties, not the **intensive** property of odor. Accordingly, even if the examiner were to adopt the applicants' suggestion that the application supports such a construction of the term "small tank," i.e., as a tank characterized by a "pungent" ammonia aroma or odor, such construction would again be repugnant to the skilled artisan's understanding of the common albeit unreasonably imprecise terms of "small" and "large."

Applicants argue that there is "nothing improper respecting Applicant[s] defining small-tank systems utilizing both dimensional and functional characteristics, in that a person of ordinary skill in the art of the Application would understand 'small-tank toilet system' as utilized within the Application" (Response, 7/1/02, page 9). This argument is unpersuasive for several reasons. First, while the examiner might have agreed with the first part of the statement, i.e., "[t]here is nothing improper respecting Applicant[s] defining small-tank systems utilizing both dimensional and functional characteristics," the examiner can no longer take that view in light of Applicants' disagreement with the

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examiner's previously communicated claim construction that "small-tank system" is necessarily less than 120 gal. in size. Recall that on page 8 of the response, Applicants argued that "[n]o dimensional upper boundary limit was recited." Second, claim 3 is not clearly¹ limited to a method for treating a "small-tank **toilet** system." Claim 3 is directed to a method for treating a "small-tank system."

Nothing should deter applicants from filing claims in a continuation application directed to, for example, "a method for treating a waste tank system comprising providing a waste tank system containing waste which but for the practice of the presently claimed invention would be malodorous" or the like concept having adequate descriptive support in the specification.

Applicants maintain that the odor problem is linked to the size of the waste tank. Accordingly, any effort to decouple the size limitation from the odor problem (or odor solution) would cause the claimed invention to be directed to an invention applicants themselves did not understand to be their own. Accordingly, such a claim would not be afforded the benefit of this application (09/723549) but rather only that of the continuation-in-part application. If filed in this application, such a claim would be subject to rejection under §112(2nd) not only for want of reasonable precise standards to judge an odor as a "malodor" (too subjective) but also insofar as the claimed invention would be directed to subject matter the applicants did not deem to be their invention.

¹ In claim 3, note the preamble recital of a "method for treating a small-tank system" while requiring the charging of a "small-tank toilet system" with flushing fluid. It is not clear whether the "small-tank toilet system" recited in the body of the claim is the same "small-tank system" to which the claimed invention is directed. Claim 3 – and every other claim reciting "small-tank system" in the preamble and "small-tank toilet-system" in the body of the claim – are rejected therefore under 35 USC 112(2nd) for failing to

Efforts to define odor levels in the art are known. Vandenberg describes ammonia fumes in terms of airborne ammonia concentration, e.g., 120 ppm ammonia (example at bottom of column 10). A somewhat more subjective scale is also provided at example 2 in col. 9).

Note: The art recognizes that some rather large vessels are prone to malodor, too: See, for example, USP 6344141 to Vandenberg, describing a 7.5 million gallon waste lagoon characterized by 120 ppm ammonia fumes (col 10 line 58). Such level of fumes is impliedly malodorous given Vandenberg's description of the prior art problem ("offensive odors" at col 1 line 47).

Perhaps the odor problem is not linked to size of vessel but rather to whether the vessels are adequately vented, or whether they are open or enclosed. See also Garcia '466. See also Duan '669 describing continuous computer-based quantitative ammonia gas detection. Nakao '285 considers 20 ppm ammonia as having an "offensive odor." Hackett '233 states that poultry house ammonia levels are 30 – 100 ppm and implies that below 20 ppm ammonia, the odor in the air is not offensive.

To the extent that patentability may ultimately require the allowed claims to be limited to tanks of a particular size, please note the advise of MPEP §2173.05(b)(3rd parag.):

When relative terms are used in claims wherein the improvement over the prior art rests entirely upon the size or weight of an element in a combination of elements, the adequacy of the disclosure of a standard [for measuring the degree] is of greater criticality.

particularly point out and distinctly claim the subject matter for which protection under the patent laws of this country is sought.

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Claim 27 is rejected under this section for want of antecedent basis for “the methyl salicylate.” Also, “the filler . . . is combined . . . **by** at least about . . . ” (emphasis added) cannot be understood.

35 USC 102(e)

Claims 3 – 4, 8, 11-20, 42 are rejected under 35 USC 102(e) as clearly anticipated by USP 6325934 to Tobey.² See col 8 line 43 in view of col 10 lines 28 – 32. The weight ratio of bacteria to surfactant is 33% - 300%. See also col 4 line 54 in view of col 10 lines 28 – 32. The weight ratio of bacteria to surfactant is 11% - 100%. The examiner considers applicants’ limitation of “about 10%” to read on Tobey’s disclosure of 11%. Tobey does not disclose the size of any tank treated by the method, but these claims are not limited to any particular size tank (in light of applicants’ arguments of record). Limestone is a filler.

35 USC 103(a)

Claims 5, 35 – 41 are rejected under §103(a) as obvious over Tobey in view of Richardson. Richardson describes use of a toilet system treatment on a boat. It would have been obvious to have added the Tobey composition to a toilet on a boat.

² Tobey was not cited previously because it had not occurred to the examiner that the applicants would argue that “small tank system” is any tank system limited only with respect to a pungent odor and not by any measure with respect to size.

Claims 9 -10 are rejected under §103(a) as obvious over Tobey in view of Glendening. Tobey describes formulation of the bacterial composition with limestone, which is widely known to include calcium carbonate. USP 6245552 to Glendening describes a waste treatment formulation containing bacteria growth media including yeast extract (a.k.a., Brewer's yeast). The formulation including bacteria, yeast extract, and a carbon source, e.g., dextrin, is dried and reconstituted with water prior to use. It would have been obvious to have included yeast extract in the Tobey composition to facilitate reconstitution of the bacteria.

Claims 3,4,5,8-20, 35-42 are rejected under §103(a) as being obvious over USP 3720606 to Horney or over Horney in view of Tobey . It would have been obvious to have varied the weight ratio of bacteria to surfactant either because this is a known result effective variable, or because Tobey teaches a ratio value of about 11%.

Claim 27 is rejected under §103(a) as being obvious over Toney in view of Horney.. Horney suggests modification of Tobey by the addition of methyl salicylate as a "suitable perfumant" (col 3 line 2).

Claim 28 is rejected under §103(a) as obvious over Tobey in view of USP 3927200 to Yoshimura. Tobey describes use of an enzyme / bacteria combination composition. Yoshimura teaches that monoethanolamine alone is effective for stabilizing compositions of an enzyme in an aqueous state. Accordingly, given Tobey's

description of an aqueous enzyme/bacteria solution, Yoshimura suggests the use of monoethanolamine to stabilize aqueous enzyme compositions. It would have been obvious to have added monoethanolamine to Tobey's composition to stabilize the enzymes therein.

Claim 28 is rejected under §103(a) as obvious over DiTuro in view of Tobey and Yoshimura. DiTuro describes a composition comprising enzymes, bacteria, surfactant, and alcohol (propylene glycol). Tobey suggest using such a composition in a small tank toilet system. Yoshimura suggests addition of enzyme stabilizers, such as a combination of glycerin and monoethanolamine, to aqueous enzyme formulations. Glycerin is another name for glycerol – and is an alcohol itself. The relative amounts of the components of the formulation suggested by the art would have been obvious insofar as component concentration in a multi-component compositions is a known result effective variable.

Claim 28 is rejected under §103(a) as obvious over DiTuro in view of Tobey and USP 5397699 to Davis. DiTuro describes a composition comprising enzymes, bacteria, surfactant, and alcohol (propylene glycol). Tobey suggest using a buffered enzyme/bacteria composition in a small tank toilet system, but does not describe a particular buffer. Davis describes monoethanolamine as a well-known buffer for use in buffering enzyme solutions. It would have been obvious to have included a

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monoethanoamine buffer in the DiTuro composition, as taught by Tobey, and to have selected a well-known enzyme buffer=, such as monoethanolamine as taught by Davis.

Other Art Cited of Interest

USP 5863882 to Lin describes flushing a formulation comprising bacteria, surfactant, dye, and fragrance down a toilet or other surfaces rinsed with water and discharged to a holding tank.

USP 6376451 to Teasdale describes a composition comprising surfactant and bacteria.

USP 6069004 to Teramachi describes deodorizing a foul or malodorous gas using bacteria.

USP 6245556 to Sako describes deodorizing a foul or malodorous gas emanating from a garbage disposal unit.

USP 6399056 to Ono is cited for teaching that odor problems are not limited to small tanks but to large scale waste treatment plants, too.

USP 5736049 to Bundy is cited for teaching that odor problems are not limited to small tanks but to large scale waste treatment lagoons, too.

USP 6225362 to Cox teaches bacterial formulations comprising bacteria, inorganic nutrients, surfactant, and polysaccharide (a carbon source).

USP 5275943 to DiTuro describes bacteria in combination with surfactant polyethylene glycol. USP 5449619 also describes bacteria/surfactant/dye/fragrance combinations.

JP 62-166878 to Toda is cited for absorption of bad smell such as ammonia.

Festo

Applicants assert that various of their amendments do not constitute narrowing amendments within the meaning the recent Festo³ case. Not at issue now, but perhaps at issue should this application issue and be the subject of a patent infringement action – or even a broadening reissue application – is the range of equivalents under the doctrine of equivalence. The examiner finds it prudent at this point to provide applicants with an excerpt from the Supreme Court's opinion in Festo:

We agree with the Court of Appeals that a narrowing amendment made to satisfy any requirement of the Patent Act may give rise to an estoppel. As that court explained, a number of statutory requirements must be satisfied before a patent can issue. The claimed subject matter must be useful, novel, and not obvious. 35 U.S.C. §§101– 103 (1994 ed. and Supp. V). In addition, the patent application must describe, enable, and set forth the best mode of carrying out the invention. §112 (1994 ed.). These latter requirements must be satisfied before issuance of the patent, for

³ Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 62 USPQ2d 1705 (US SupCt 2002)

exclusive patent rights are given in exchange for disclosing the invention to the public. What is claimed by the patent application must be the same as what is disclosed in the specification; otherwise the patent should not issue. The patent also should not issue if the other requirements of §112 are not satisfied, and an applicant's failure to meet these requirements could lead to the issued patent being held invalid in later litigation.

Petitioner contends that amendments made to comply with §112 concern the form of the application and not the subject matter of the invention. The ***PTO might require the applicant to clarify an ambiguous term***, to improve the translation of a foreign word, or to rewrite a dependent claim as an independent one. In these cases, petitioner argues, the applicant has no intention of surrendering subject matter and should not be estopped from challenging equivalent devices. While this may be true in some cases, petitioner's argument conflates the patentee's reason for making the amendment with the impact the amendment has on the subject matter.

Estoppel arises when an amendment is made to secure the patent and the amendment narrows the patent's scope. If a §112 amendment is truly cosmetic, then it would not narrow the patent's scope or raise an estoppel. ***On the other hand, if a §112 amendment is necessary and narrows the patent's scope—even if only for the purpose of better description—estoppel may apply.*** A patentee who narrows a claim as a condition for obtaining a patent disavows his claim to the broader subject matter, whether the amendment was made to avoid the prior art ***or to comply with §112.*** We must regard the patentee as having conceded an inability to claim the broader subject matter or at least as having abandoned his right to appeal a rejection. In either case estoppel may apply.

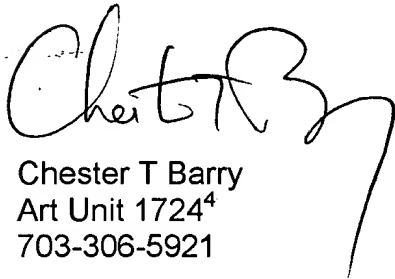
(emphasis added)(case citations omitted).

35 USC 112, first paragraph – lack of enablement

Claims 3-5, 8-20, 27, 28 and 35-42 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is

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most nearly connected, to make and/or use the invention. The application clearly does not enable non-liquid based flushing fluids. While it is enabling for liquids and dilute slurries, it is not enabled for gas-based flushing fluids. Limitation to "flushing liquid" is required to overcome this rejection. This rejection was necessitated only by applicants' argument that "fluid" in this application includes gases.



Chester T Barry
Art Unit 1724⁴
703-306-5921

7/4/02

⁴ Please amend your paper caption to reflect that this art unit is not 1723 but rather 1724. Doing so will facilitate proper matching of incoming papers with this application by the PTO's clerical staff.